

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number
WO 2005/071497 A1

(51) International Patent Classification⁷: G03H 1/02,
G06K 19/16, G07D 7/12, G02B 5/30, 5/18

(21) International Application Number:
PCT/GB2005/000171

(22) International Filing Date: 19 January 2005 (19.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0401060.9 19 January 2004 (19.01.2004) GB

(71) Applicant and

(72) Inventor: EZRA, David [GB/GB]; 19 Monks Mead,
Brightwell-cum-Sotwell, Wallingford, Oxon OX10 0RL
(GB).

(74) Agents: NEWELL, William, Joseph et al.; Wynne-Jones,
Laine & James, 22 Rodney Road, Cheltenham, Gloucester-
shire GL50 1JJ (GB).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

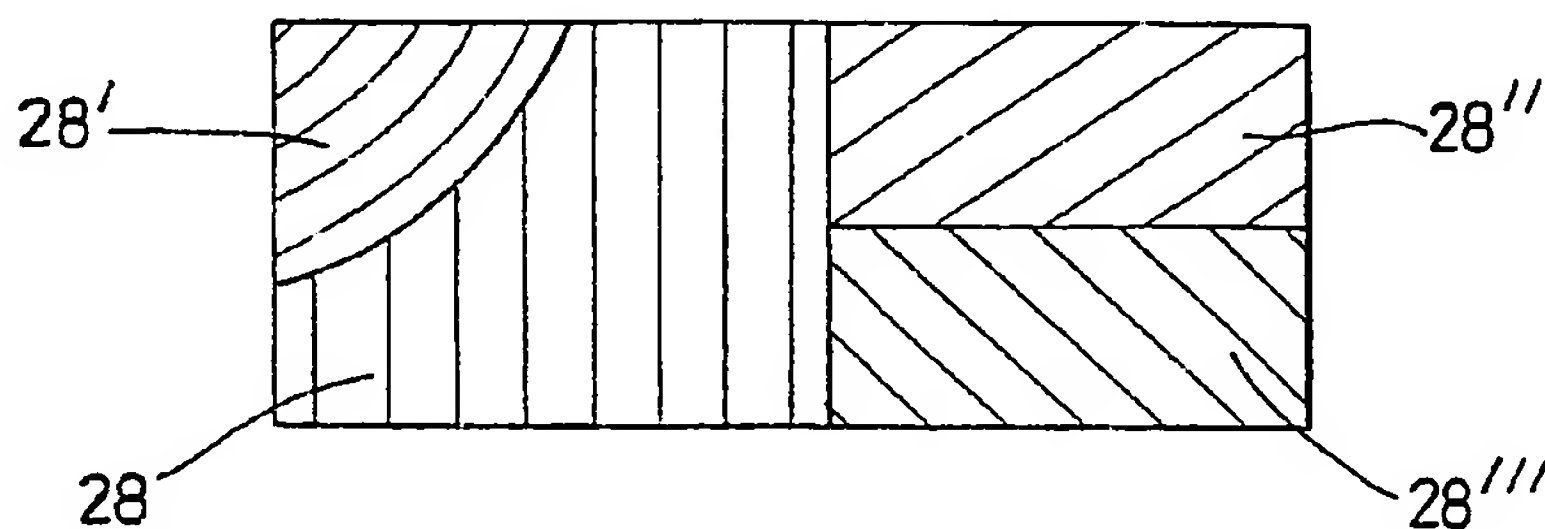
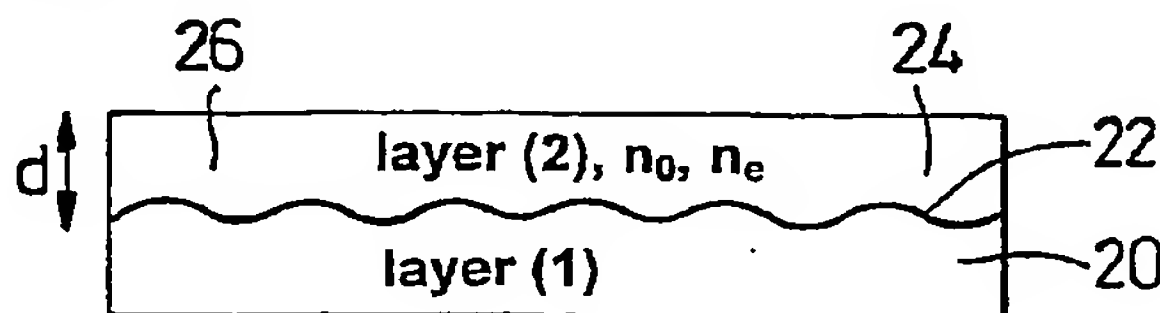
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

[Continued on next page]

(54) Title: DIFFRACTIVE, POLARIZATION MODULATING OPTICAL DEVICES

reflective mode



(57) Abstract: An optical device comprises an encoding surface having a micro-relief pattern (22) over at least part thereof designed to produce a predetermined diffracted first image when illuminated in use, and an optically anisotropic layer (26) such as a polymerised liquid crystal provided whereby at least part of said micro-relief pattern (22) induces local orientation of said optically anisotropic layer (26) thereby to impose a predetermined polarization modulation, thereby to produce a predetermined polarization dependent second image when illuminated in use.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.